



NEXT GENERATION 9-1-1 GIS

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WHY I'M HERE TODAY

- 9-1-1 Community is well informed about NG9-1-1
- However.....
- GIS community may not be as informed
 - Need their help
 - Critical stakeholder group
- 9-1-1 Vendor community may not be as informed
 - Impacts data processes supporting their software
- So you know.... NG9-1-1 project is driving the development and aggregation of two of the state's most important GIS datasets
 - Road Centerlines
 - Address Points



NG9-1-1 – WHAT IS IT?

- NG9-1-1 is a new 911 database & network architecture for delivery of 9-1-1 calls
- NG9-1-1 uses spatial analysis to route 9-1-1 calls to the right 9-1-1 center
 - Given an address or a geometry, which 9-1-1 jurisdiction should respond?
 - “is within” Polygon analysis
- MUST have accurate statewide addressing and emergency response GIS data to meet NG9-1-1 requirements
- ND is in the beginning stages of its transition to NG9-1-1



WHAT DOES DATA LOOK LIKE TODAY?

- Master Street Address Guide (MSAG)

Direction	Street	SuffixType	SuffixDirection	Low	High	OddEven	Community	State	ESN	Exchange
	12TH	AVE	NE	1200	1210	E	BENTLEY	ND	4203	ADAMS COUNTY
	12TH	AVE	NE	1300	1310	E	BENTLEY	ND	4203	ADAMS COUNTY
	12TH	AVE	NE	1400	1410	E	BENTLEY	ND	4205	ADAMS COUNTY
	12TH	AVE	NE	1500	1510	E	BENTLEY	ND	4199	ADAMS COUNTY
	12TH	AVE	NE	1600	1611	B	BENTLEY	ND	4199	ADAMS COUNTY
	12TH	AVE	NE	1700	1710	E	BENTLEY	ND	4199	ADAMS COUNTY
	12TH	AVE	NE	2400	2411	B	BENTLEY	ND	4198	ADAMS COUNTY
	13TH	AVE	NE	2700	2711	B	BENTLEY	ND	4201	ADAMS COUNTY
	13TH	AVE	NE	2800	2811	B	BENTLEY	ND	4201	ADAMS COUNTY
	13TH	AVE	NE	2900	2910	E	BENTLEY	ND	4201	ADAMS COUNTY
	13TH	AVE	NE	3000	3010	E	BENTLEY	ND	4201	ADAMS COUNTY
	13TH	AVE	NE	3100	3110	E	BENTLEY	ND	4201	ADAMS COUNTY
	13TH	ST	NE	1200	1207	B	BENTLEY	ND	4203	ADAMS COUNTY
	14TH	AVE	NE	1500	1511	B	BENTLEY	ND	4199	ADAMS COUNTY



WHAT DOES DATA LOOK LIKE TODAY?

○ Automatic Location Identification (ALI)

Landline / Fixed VoIP

204
(701) XXX-XXXX BUSN 07/16
13:03
ABUSE RESOURCE NETWORK
121 P#XXX-XXX-XXXX
FOREST ST

LN 1 502 00390
ND BEULAH
TEL=DRTC

PSAP=NDSR
LISBON POLICE
LISBON FD
FIRST MEDIC AMB

Wireless

203
(701) XXX-XXXX WPH1 07/16
13:35
ALLTEL 425-313-5233
6622 P#XXX-XXX-XXXX
Highway 32 - Omni Sect
or
CALLBK=(701)680-0132 502
02014
ND 00241-1-003, Lisbon
TEL=ACIW
+46.452212 -097.679443 1709
PSAP=NDSR
WIRELESS 911 CALL
VERIFY CALLER LOCATION
AND CALL BACKNUMBER

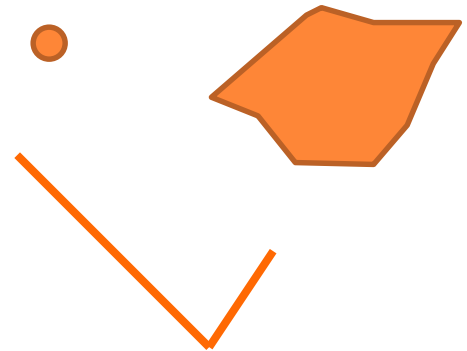
WHAT DOES NG9-1-1 DATA LOOK LIKE?

○ GIS Database (Replaces MSAG)

- Road Centerlines
- Site/Structure Points
- State, County Municipal Boundaries
- Law, Ambulance, Fire Boundaries
- Public Safety Answering Point (PSAP) Boundaries

○ PIDF-LO (Replaces ALI)

- XML used to represent physical addresses associated with 9-1-1 caller
- GML used to represent geographic location associated with 9-1-1 caller



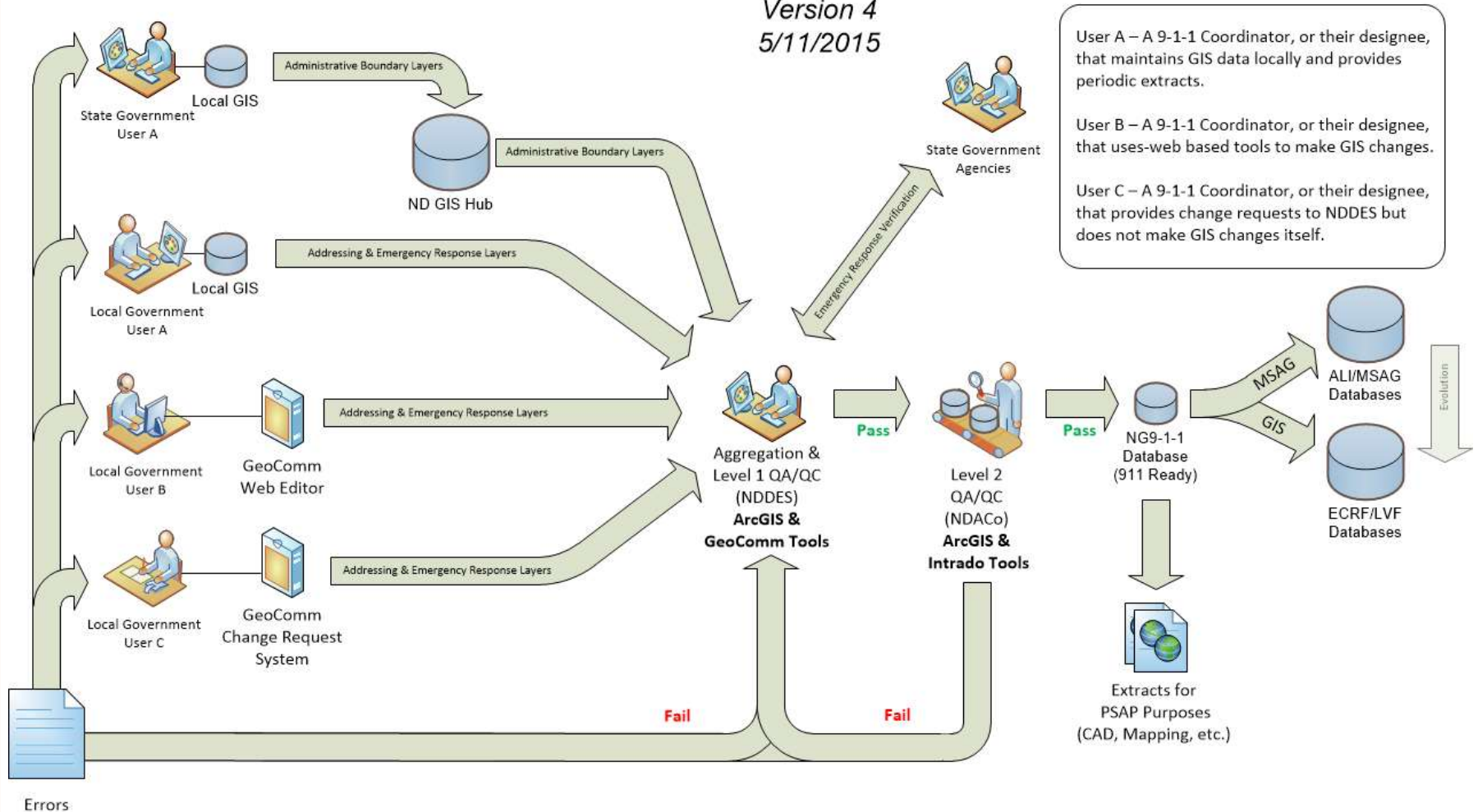
THE NEED FOR NEW WORKFLOWS

- Isolation of authoritative address and emergency response data no longer works for 911
- All ND counties have agreed to move forward on NG9-1-1
- GIS is a fundamental prerequisite for NG9-1-1
- GIS must meet a set of minimum requirements
 - 9-1-1 Association GIS Standard
- County can still choose how they intend to keep their data maintained



ND Statewide NG9-1-1 GIS Data Workflow

Version 4
5/11/2015



STAKEHOLDER ROLES

○ GIS Layer Roles & Responsibilities

- City, County, and Regional Entities (Typically the 911 Coordinator)
 - Maintenance of Road Centerlines, Structure points, Ambulance, Law Enforcement, Fire and Municipal boundaries
 - May designate authority to other agency or contractor
- Department of Emergency Services
 - Statewide Data Aggregation
 - Level 1 QA/QC
- NDACo
 - Level 2 QA/QC
 - MSAG Development
 - MSAG Provisioning
 - PSAP & ESN boundary maintenance
- State Agencies
 - Maintenance of State, County boundaries
 - Aggregation of Municipal boundaries
 - QA/QC of emergency service boundary change requests



CONTACT INFORMATION

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- If you build and/or maintain road centerlines, address points, or emergency responder layers, please reach out to us with your questions!

